

PTO/SB/21 (09-04) *#ITW***TRANSMITTAL  
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number

09/724,548

Filing Date

November 28, 2000

First Named Inventor

Stephen R. Quake

Art Unit

1743

Examiner Name

Brian J. Sines

Attorney Docket Number

20174C-001120US

**ENCLOSURES** (Check all that apply)

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Fee Transmittal Form<br><input type="checkbox"/> Fee Attached<br><input type="checkbox"/> Amendment/Reply<br><input type="checkbox"/> After Final<br><input type="checkbox"/> Affidavits/declaration(s)<br><input type="checkbox"/> Extension of Time Request<br><input type="checkbox"/> Express Abandonment Request<br><input checked="" type="checkbox"/> Information Disclosure Statement<br><br><input type="checkbox"/> Certified Copy of Priority Document(s)<br><input type="checkbox"/> Reply to Missing Parts/ Incomplete Application<br><input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53 | <input type="checkbox"/> Drawing(s)<br><input type="checkbox"/> Licensing-related Papers<br><input type="checkbox"/> Petition<br><input type="checkbox"/> Petition to Convert to a Provisional Application<br><input type="checkbox"/> Power of Attorney, Revocation<br>Change of Correspondence Address<br><input type="checkbox"/> Terminal Disclaimer<br><input type="checkbox"/> Request for Refund<br><input type="checkbox"/> CD, Number of CD(s) _____<br><input type="checkbox"/> Landscape Table on CD | <input type="checkbox"/> After Allowance Communication to TC<br><input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences<br><input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)<br><input type="checkbox"/> Proprietary Information<br><input type="checkbox"/> Status Letter<br><input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):<br>SB/08<br>34 references<br>Return postcard |
|---|---|--|

Remarks

The Commissioner is authorized to charge any additional fees to Deposit Account 20-1430.

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm Name

Townsend and Townsend and Crew LLP

Signature

*Patrick M. Boucher*

Printed name

Patrick M. Boucher

Date

November 15, 2005

Reg. No.

44,037

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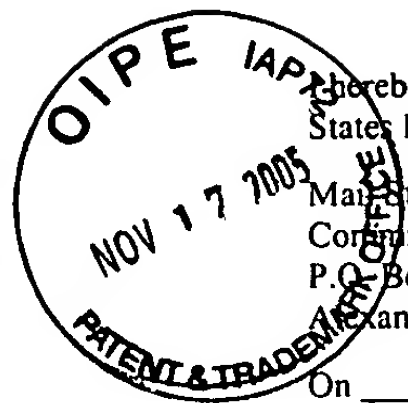
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On November 15, 2005

TOWNSEND and TOWNSEND and CREW LLP

By: Janet L. Newmaker  
Janet L. Newmaker

PATENT

Attorney Docket No.: 20174C-001120US

Client Reference Nos.: CIT 3153  
and C111.310.US

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Stephen R. Quake et al.

Application No.: 09/724,548

Filed: November 28, 2000

For: Integrated Active Flux  
Microfluidic Devices And  
Methods

Customer No.: 20350

Confirmation No.: 8333

Examiner: Brian J. Sines

Art Unit: 1743

**SUPPLEMENTAL INFORMATION  
DISCLOSURE STATEMENT UNDER  
37 CFR §§ 1.97 AND 1.98**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The references cited on attached form PTO/SB/08A and PTO/SB/08B are being called to the attention of the Examiner. Copies of the non-US references (in compliance with the requirements of 1287 OG 163) are enclosed.

It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

11/18/2005 CNGUYEN 00000014 201430 09724548

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As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

This IDS is being filed before the mailing date of the final Office Action or Notice of Allowance.

Please charge the IDS fee of \$180 to Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account. A duplicate copy of this Statement is enclosed for that purpose.

Respectfully submitted,



Patrick M. Boucher  
Reg. No. 44,037

Date: November 15, 2005

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PMB/jln  
60634321 v1



OIP

PTO/SB/08A (08-03)

<b>Substitute for form 1449A/PTO</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			<b>Complete if Known</b>		
			Application Number	09/724,548	
			Filing Date	November 28, 2000	
			First Named Inventor	Stephen R. Quake	
			Art Unit	1743	
			Examiner Name	Brian J. Sines	
Sheet	1	of	5	Attorney Docket Number	20174C-001120US

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number Kind Code <sup>2</sup> (if known)			
	A53	US-2,656,508	10-20-1953	Coulter	
	A54	US-3,560,754	02-02-1971	Kamentsky	
	A55	US-4,675,300	06-23-1987	Zare et al.	
	A56	US-4,786,165	11-22-1988	Yamamoto et al.	
	A57	US-4,908,112	03-13-1990	Pace	
	A58	US-4,963,498	10-16-1990	Hillman et al.	
	A59	US-5,032,381	07-16-1991	Bronstein et al.	
	A60	US-5,126,022	06-30-1992	Soane et al.	
	A61	US-5,140,161	08-18-1992	Hillman et al.	
	A62	US-5,164,598	11-17-1992	Hillman et al.	
	A63	US-5,271,724	12-21-1993	van Lintel	
	A64	US-5,434,049	07-18-1995	Okuno et al.	
	A65	US-5,452,878	09-26-1995	Gravesen et al.	
	A66	US-5,486,335	01-23-1996	Wilding et al.	
	A67	US-5,498,392	03-12-1996	Wilding et al.	
	A68	US-5,500,071	03-19-1996	Kaltenbach et al.	
	A69	US-5,512,131	04-30-1996	Kumar et al.	
	A70	US-5,558,998	09-24-1996	Hammond et al.	
	A71	US-5,580,523	12-03-1996	Bard	
	A72	US-5,589,136	12-31-1996	Northrup et al.	
	A73	US-5,632,876	05-27-1997	Zanzucchi et al.	
	A74	US-5,641,400	06-24-1997	Kaltenbach et al.	
	A75	US-5,661,222	08-26-1997	Hare	
	A76	US-5,702,618	12-30-1997	Saaski et al.	
	A77	US-5,716,852	02-10-1998	Yager et al.	
	A78	US-5,726,751	03-10-1998	Altendorf et al.	
	A79	US-5,750,015	05-12-1998	Soane et al.	

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				Examiner Name	Brian J. Sines
Sheet	2	of	5	Attorney Docket Number	20174C-001120US

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Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number Kind Code <sup>2</sup> (if known)			
	A80	US-5,757,482	05-26-1998	Fuchs et al.	
	A81	US-5,800,690	09-01-1998	Chow et al.	
	A82	US-5,833,926	11-10-1998	Wurzel et al.	
	A83	US-5,837,200	11-17-1998	Diessel et al.	
	A84	US-5,852,495	12-22-1998	Parce	
	A85	US-5,856,174	01-05-1999	Lipshutz et al.	
	A86	US-5,863,801	01-26-1999	Southgate et al.	
	A87	US-5,869,004	02-09-1999	Parce et al.	
	A88	US-5,880,071	03-09-1999	Parce et al.	
	A89	US-5,904,824	05-18-1999	Oh	
	A90	US-6,117,634	09-12-2000	Langmore et al.	
	A91	US-6,221,654 B1	04-24-2001	Quake et al.	
	A92	US-2002/0037499 A1	03-28-2002	Quake et al.	
	A93	US-2004/0248167 A1	12-09-2004	Quake et al.	
	A94	US-6,833,242 B2	12-21-2004	Quake et al.	

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				First Named Inventor	Stephen R. Quake
				Art Unit	1743
				Examiner Name	Brian J. Sines
Sheet	3	of	5	Attorney Docket Number	20174C-001120US

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
	B20	EP	0 745 682	B1	12-04-1996	Bayer AG		<input type="checkbox"/>
	B21	EP	0 778 351	B1	06-11-1997	Hitachi, Ltd.		<input type="checkbox"/>
	B22	GB	2 264 296	A	08-25-1993	Zortech International Limited		<input type="checkbox"/>
	B23	GB	2 264 496	A	09-01-1993	United States Department of Energy		<input type="checkbox"/>
	B24	WO	91/13338	A2	09-05-1991	Hatfield Polytechnic Higher Education Corporation		<input type="checkbox"/>
	B25	WO	91/15750	A1	10-17-1991	Carrimed Ltd.		<input type="checkbox"/>
	B26	WO	94/05414	A1	03-17-1994	The Regents of the University of California		<input type="checkbox"/>
	B27	WO	95/33846	A1	12-14-1995	Affymax Technologies N.V.		<input type="checkbox"/>
	B28	WO	95/33853	A1	12-14-1995	University of Tennessee Research Corporation		<input type="checkbox"/>
	B29	WO	97/02357	A1	01-23-1997	Affymetrix, Inc.		<input type="checkbox"/>
	B30	WO	97/38300	A1	10-16-1997	Soane Biosciences		<input type="checkbox"/>
	B31	WO	98/08931	A1	03-05-1998	BTG USA Inc.		<input type="checkbox"/>

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Substitute for form 1449B/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				Application Number	09/724,548
				Filing Date	November 28, 2000
				First Named Inventor	Stephen R. Quake
				Art Unit	1743
				Examiner Name	Brian J. Sines
Sheet	4	of	5	Attorney Docket Number	20174C-001120US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	C162	AFFHOLTER, JOSEPH et al., "Engineering A Revolution," Chemistry in Britain, pp. 48-51, 4/1999	
	C163	ARNOLD, FRANCES H., "Design By Directed Evolution," Accounts of Chemical Research, Vol. 31, No. 3, pp. 125-131, 1998	
	C164	BEIN, THOMAS, "Efficient Assays For Combinatorial Methods For The Discovery Of Catalysts," Angew. Chem. Int. Ed., Vol. 38, No. 3, pp. 323-326, 1999	
	C165	BUDOWLE, BRUCE et al., "Analysis Of The VNTR Locus DIS80 By The PCR Followed By High-Resolution PAGE," Am. J. Hum. Genet., Vol. 48, pp. 137-144, 1991	
	C166	CHOU, HOU-PU, "Microfabricated Devices For Rapid DNA Diagnostics," Doctoral Thesis, California Institute of Technology, pp. i-xii and 1-106, 5/30/2000	
	C167	CROSLAND-TAYLOR, P. J., "A Device For Counting Small Particles Suspended In A Fluid Through A Tube," Nature, Vol. 171, pp. 37-38, 1/3/1953	
	C168	GIUSTI, ALAN et al., "Application Of Deoxyribonucleic Acid (DNA) Polymorphisms To The Analysis Of DNA Recovered From Sperm," Journal of Forensic Science, Vol. 31, No. 2, pp. 409-417, 4/1986	
	C169	HANES, JOZEF, et al., "In Vitro Selection And Evolution Of Functional Proteins By Using Ribosome Display," Proc. Natl. Acad. Sci. USA, Vol. 94, pp. 4937-4942, 5/1997	
	C170	HERMANSON, Greg T. et al., "Chapter 2 - Activation Methods," Immobilized Affinity Ligand Techniques, Academic Press, pp. 2 cover pages, 51-136, 1992	
	C171	HOFFMULLER, ULRICH et al., "In Vitro Evolution And Selection Of Proteins: Ribosome Display For Larger Libraries," Angew. Chem. Int. Ed., Vol. 37, No. 23, pp. 3241-3243, 1998	
	C172	JEFFREYS, ALEC J. et al., "Hypervariable 'Minisatellite' Regions In Human DNA," Nature, Vol. 314, pp. 67-73, 3/7/1985	
	C173	JERMUTUS, LUTZ, et al., "Recent Advances In Producing And Selecting Functional Proteins By Using Cell-Free Translation," Current Opinion in Biotechnology, Vol. 9, pp. 534-548, 1998	
	C174	JU, LI-YA et al., "Application Of Silver Staining To The Rapid Typing Of The Polymorphism Of HLA-DQ Alleles By Enzymatic Amplification and Allele-Specific Restriction Fragment Length Polymorphism," Electrophoresis, Vol. 12, pp. 270-273, 1991	
	C175	KANTER, EVAN et al., "Analysis Of Restriction Fragment Length Polymorphisms In Deoxyribonucleic Acid (DNA) Recovered From Dried Bloodstains," Journal of Forensic Sciences, Vol. 31, No. 2, pp. 403-408, 4/1986	
	C176	MOLDAVAN, ANDREW, "Photo-Electric Technique For The Counting Of Microscopical Cells," Science, Vol. 80, No. 2069, pp. 188-189, 8/24/1934	
	C177	MURRAY, VINCENT et al., "Detection Of Polymorphisms Using Thermal Cycling With A Single Oligonucleotide On A DNA Sequencing Gel," Human Mutation, Vol. 2, pp. 118-122, 1993	

Examiner Signature		Date Considered	
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Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				<b>Complete if Known</b>	
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				Filing Date	November 28, 2000
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				Art Unit	1743
				Examiner Name	Brian J. Sines
Sheet	5	of	5	Attorney Docket Number	20174C-001120US

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Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	C178	NAKAMURA, YUSUKE et al., "Variable Number Of Tandem Repeat (VNTR) Markers For Human Gene Mapping," Science, Vol. 235, pp. 1616-1622, 3/27/1987	
	C179	ROBERTS, RICHARD W. et al., "RNA-Peptide Fusions For The <i>In Vitro</i> Selection Of Peptides And Proteins," Proc. Natl. Acad. Sci. USA, Vol. 94, pp. 12297-12302, 11/1997	
	C180	ROUHI, MAUREEN, "Sizing, Sorting DNA One Piece At A Time," C&EN, pp. 5-6, 1/11/1999	
	C181	TATARI, ZOHREH et al., "HLA-Cw Allele Analysis By PCR-Restriction Fragment Length Polymorphism: Study Of Known And Additional Alleles," Proc. Natl. Acad. Sci. USA, Vol. 92, pp. 8803-8807, 9/1995	
	C182	TAWFIK, DAN S. et al., "Man-Made Cell-Like Compartments For Molecular Evolution," Nature Biotechnology, Vol. 16, pp. 652-656, 7/1998	
	C183	VAN DILLA, M. A. et al., "Cell Microfluorometry: A Method For Rapid Fluorescence Measurement," Science, Vol. 163, pp. 1213-1214, 3/14/1969	

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